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41,733  
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PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

### Application of:

Applicant : Thomas Wiegele et al.  
Appln. No. : 10/620,119  
Filed : July 15, 2003  
Title : MICRO MIRROR ARRAYS AND MICROSTRUCTURES  
WITH SOLDERABLE CONNECTION SITES  
Docket No. : 015559-288  
Art Unit : 2874

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT

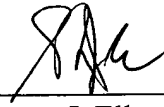
Pursuant to 37 C.F.R. §1.56, the Examiner's attention is directed to the references listed on the attached Information Disclosure Citation. Copies of all foreign patent documents and non-patent literature references are provided herewith.

It is to be understood that the present submission of art is in no way intended to be a waiver of any arguments or defenses available to the applicant under the rules of the U.S. Patent and Trademark Office and the statutes of the United States.

It is believed that this information disclosure statement is being filed prior to the issuance of the first Official Action and, therefore, no fee is required. However, the Commissioner is authorized to charge any fees required by this paper, including the \$180.00 fee pursuant to 37 C.F.R. §1.17(p) if applicable, or to credit any overpayment to Deposit Account No. 20-0809.

Appln. No.: 10/620,119  
Docket No.: 015559-288  
Information Disclosure Statement

Respectfully submitted:

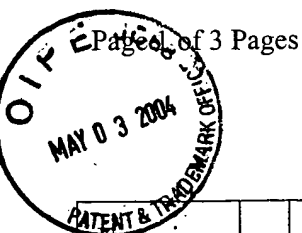
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## INFORMATION DISCLOSURE CITATION

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Applicant: Thomas Wiegeler et al.	
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## U.S. PATENT DOCUMENTS

Examiner	Document No.	Date	Name	Class	Sub	
	2003/0107794	06/2003	Siekkinen et al.			
	6,525,864	02/2003	Gee et al.			
	6,449,079	09/2002	Herrmann			
	6,291,317	09/2001	Salatino et al.			
	5,923,995	07/1999	Kao et al.			
	5,721,162	02/1998	Schubert et al.			

## FOREIGN PATENT DOCUMENT

							Trans	
Examiner	Document No.	Date	Country	Class	Sub	Y	N	
	06-120336 (with English abstract)	04/1994	Japan				X	
	08-106614 (with English abstract)	04/1996	Japan				X	

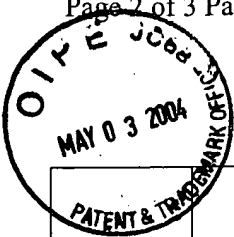
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Graph of cure time vs. glass transition temperature for BCB (date unknown) Applicants admit the status of this graph as prior art for the limited purpose of examination of this application, but otherwise reserve the right to challenge the status of this publication as prior art.
	Statement by Applicants (including Attachment A)
	M. Jenkins, et al., "Chemical and Structural Characterization of Silane Adhesion Promoting Films for Use in Microelectronic Packaging, Materials Research Society. Symp. Vol. 629, pp. FF5.12.1-FF5.12.6 (2000)
Examiner:	Date Considered:

\* Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609.  
Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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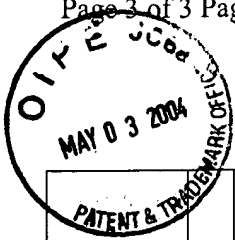
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	F. Niklaus, et al., "Low-Temperature Wafer-Level Transfer Bonding," Journal of Microelectromechanical Systems, Vol. 10, No. 4, pp. 525-531 (12/2001)
	F. Niklaus, et al., "Void-Free Full Wafer Adhesive Bonding," Department of Signals, Sensors and Systems, Royal Institute of Technology, Stockholm, Sweden (date unknown) Applicants admit the status of this publication as prior art for the limited purpose of examination of this application, but otherwise reserve the right to challenge the status of this publication as prior art.
	S.K. Sampath, et al., "Rapid MEMS Prototyping using SU-8, Wafer Bonding and Deep Reactive Ion Etching," IEEE (2001)
	A. Jourdain, et al., "Investigation of the Hermeticity of BCB-Sealed Cavities for Housing (RF-)MEMS Devices," IEEE, pp. 677-680 (2002)
	T-K. Chou et al., "3D MEMS Fabrication Using Low-Temperature Wafer Bonding with Benzocyclobutene (BCB)," The 11 <sup>th</sup> International Conference on Solid-State Sensors and Actuators, Munch, Germany (6/2001)
	J. Neysmith et al., "A Modular, Chip Scale, Direct Chip Attach MEMS Package: Architecture and Processing," The International Journal of Microcircuits and Electronic Packaging, Vol. 23, No. 4, pp. 474-480 (2000)
	P.V. Dressendorfer, et al., "MEMS Packaging – Current Issues and Approaches," 2000 International Conference on High-Density Interconnect and System Packaging (2000)
	Product literature entitled "CYCLOTENE <sup>TM</sup> 4000 Series Advanced Electronic Resins (Photo BCB) – Processing Procedures for Cyclotene 4000 Series (Photo BCB Resins DS2100 Puddle Develop Process," CYCLOTENE <sup>TM</sup> Advanced Electronic Resins, by Dow (revised 5/03/1999)
	Product literature entitled "CYCLOTENE <sup>TM</sup> 4000 Series Advanced Electronic Resins (Photo BCB) – Processing Procedures for CYCLOTENE <sup>TM</sup> 4000 Series Photo BCB Resins – Immersion Develop Process," CYCLOTENE <sup>TM</sup> Advanced Electronic Resins, by Dow (revised 4/02/2001)
	Product literature entitled "Cure and Oxidation Measurements for Cyclotene Advanced Electronic Resins," CYCLOTENE <sup>TM</sup> Advanced Electronic Resins, by Dow (date unknown) Applicants admit the status of this publication as prior art for the limited purpose of examination of this application, but otherwise reserve the right to challenge the status of this publication as prior art.
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	G. Mittendorfer, et al., "Summary Study of BCB Coating Tests," by EVG (date unknown) Applicants admit the status of this publication as prior art for the limited purpose of examination of this application, but otherwise reserve the right to challenge the status of this publication as prior art.
	"Tutorial 1 – Introduction to Flip Chi;p: What, Why, How," web page by Flip Chips Dot Com (date of first publication unknown). Applicants admit the status of this publication as prior art for the limited purpose of examination of this application, but otherwise reserve the right to challenge the status of this publication as prior art.
	S. Renard, "Wafer level Surface Mountable Chip Size Packaging for MEMS and ICs," Micromachined Devices and Components VI, Proceedings of SPIE, Vol. 4176 (2000)
	H.H. Gatzen, "Dicing challenges in microelectronics and micro electro-mechanical systems (MEMS)," Microsystem Technologies, 7, pp. 151-154 (2001)
	H.H. Gatzen, et al., "Advances in Dicing Wafers for Micro Electro-Mechanical Systems (MEMS)," Proceedings Volume 2, MICRO.tec 2000, Hanover Germany (9/2000)
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